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What's Your Radiologic Diagnosis?

by
Robert Stout*

History

A five year old Thoroughbred gelding was presented to Stange Memorial Clinic for diagnosis and treatment of its obvious left foreleg lameness. The owner reported that this racing gelding had first appeared lame quite suddenly ten days previously follow-

ing a training session. Although the horse could bear weight on the injured leg, it had shown no improvement since the lameness was first noticed.

Clinical exam revealed a hard swelling in the left pastern area. There was no pain reflex to palpation of the pastern, but a stronger than normal digital pulse and a temperature elevation at the level of the coronary band were detected.

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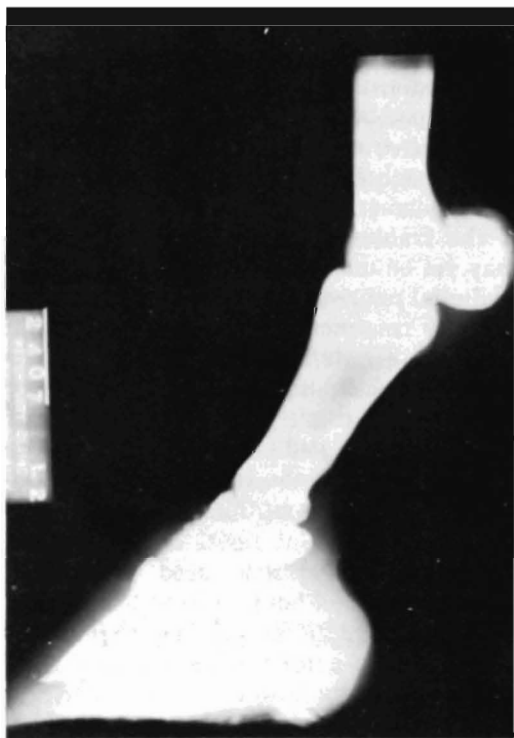


Figure 1. Lateral-medial radiograph of the left forefoot and fetlock.



Figure 2. Anterior-posterior radiograph of the left forefoot and fetlock.

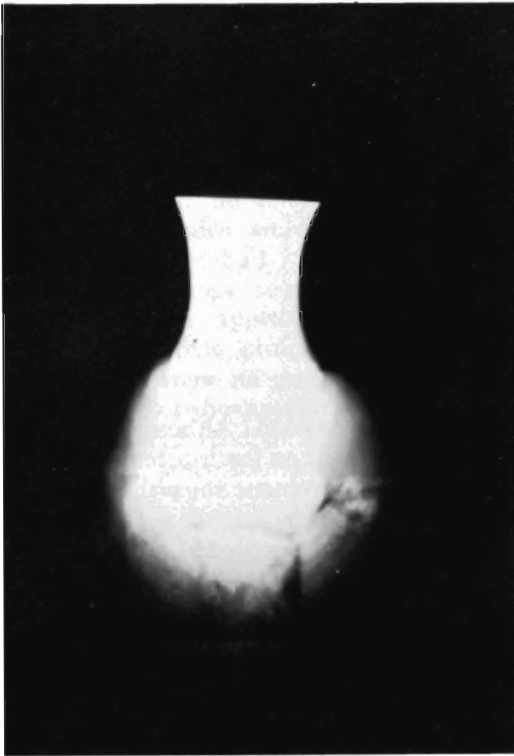


Figure 3. Dorsal-ventral radiograph of the left forefoot.

Diagnosis

- 1) Fracture of the third phalanx
- 2) Periosteal new bone growth of the second phalanx
- 3) Navicular disease

Discussion

The radiographic diagnosis of this lameness is not particularly difficult, but it is somewhat camouflaged by the multiple lesions. Admittedly, it may be impossible to identify the three lesions on this photographic reproduction of the original radiograph, but the fact that these three pathological items were originally described serve as evidence for two very basic rules

of radiology. 1) The radiograph should always be used as a tool to aid the clinical diagnosis. Your radiographic diagnosis should be consistent with the clinical signs observed. 2) The good radiologist will not be content to stop with a single lesion, but will evaluate the entire film for coexisting anomalies or pathological conditions. This may require additional radiographs of different views.

In this case diagnosis of periosteal new bone growth of the second phalanx, or of navicular disease alone would not be consistent with the history of sudden onset.

Similarly, it would be unwise to diagnose only the fracture and ignore the other lesions, because they are important factors to consider in your prognosis.

The clinical signs and history of this case might lead one to suspect a sole abscess, a fractured navicular, or a fractured third phalanx. Radiography makes differentiation possible.

Treatment

Treatment in this case was aimed at the acute problem of the fractured os pedis. It was advised that the horse be shod with a bar shoe with side clips, and that a full leather pad be used, in an effort to stabilize the wing fracture. The animal must be reshod each 5-8 weeks for 5 months.

The owner was made aware that even if the fracture were to heal, the animal may yet be unsound and require a posterior digital neurectomy for the navicular disease, or treatment for the periostitis if it begins to invade the coffin joint.

It is doubtful that this horse will ever return to the track. The prognosis is poor because the os pedis is extremely slow to heal, especially if the fracture extends into the joint as it does in this case.

Reference

Adams, O. R.: *Lameness in Horses*, 2nd ed. Lea & Febiger, Philadelphia, Pa. 1966.